McGuire Center News

A newsletter of the McGuire Center for Lepidoptera and Biodiversity ▪ Florida Museum of Natural History ▪ **APRIL 2011**

STAFF PROFILE: Akito Y. Kawahara

Akito Y. Kawahara received his B.S. in entomology from Cornell University, and his M.S. and Ph.D. in entomology from the University of Maryland. He was hired as an assistant curator at the McGuire Center following a postdoctoral fellowship with Daniel Rubinoff at the University of Hawaii.

Kawahara's research centers on Lepidoptera phylogenetics, taxonomy, conservation, fossils, life history evolution and genomics. Kawahara's focal taxa have been snout butterflies (Nymphalidae: Libytheinae), hawkmoths (Sphingidae) and leaf-mining moths (Gracillariidae). He has also studied the biogeography and diversification of the endemic Hawaiian aquatic and carnivorous fancy-case caterpillar moths (Cosmopterigidae: *Hyposmocoma*). Kawahara has conducted fieldwork in many countries, including Canada, Chile, China, Costa Rica, Democratic Republic of Congo, France, French Guiana, Japan, Madagascar, Malaysia, Mexico, Panama, Philippines, Russia, Taiwan and the United States. During these trips, he collected both butterflies and moths for molecular and morphological work. In French Guiana, Kawahara traveled to remote sites in the lower Amazon by boat and helicopter to collect moths. Similarly, he traveled to remote cliff tops in Kauai, Hawaii, to sample aquatic and carnivorous moths.

Kawahara worked on a 90-minute documentary film, "Beetle Queen Conquers Tokyo" (Argot Pictures, 2009) and is currently working on a short film about nature education in the United States. One of his goals is to educate the public about natural history. He has organized multiple symposia on Lepidoptera, at the Entomological Society of America annual meeting in San Diego and the International Congress of Entomology in South Africa. Kawahara served as a lead author on one of the first comprehensive phylogenetic studies of hawkmoths, co-authored two influential papers on the evolution of Lepidoptera and published a number of taxonomic and evolutionary papers on moths. He recently collaborated with a team of international researchers to understand the evolutionary history of vibratory signaling in caterpillars.

Akito Kawahara collects aquatic moths in Hawaii.

LEFT: Sphinx Moth, *Adhemarius daphne*, Argentina
RIGHT: Akito Kawahara collects moths in Taiwan.

Kawahara's future research plans include primarily focusing on the systematics and evolution of leaf-mining moths and hawkmoths. With the latter, he is planning a novel collaboration with Jesse Barber of Boise State University to study the communication mechanisms of hawkmoths and bats. He hopes to help expand the McGuire Center's moth collection, both by increasing the number of Museum moth specimens and building a central DNA-based collection of Lepidoptera.

McGuire Center: Akito Kawahara is an assistant professor and assistant curator of Lepidoptera at the McGuire Center. His duties include curating collections, conducting research, advising graduate students and teaching courses.

IN THIS ISSUE:

FROM THE EDITOR:

We devoted last year's issue to graduate student research. With the number of new McGuire Center staff members, we decided to provide profiles for the 15 non-student researchers. The brief descriptions of past, ongoing, and future research and other news illustrate another exciting year, marked with field and laboratory explorations, scientific conferences and publications that contribute to the McGuire Center's continued status as the world's largest Lepidoptera research facility.

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STAFF PROFILE: Vladimir Lukhtanov

Vladimir Lukhtanov is a senior research scientist in the department of karyosystematics at the Zoological Institute of the Russian Academy of Sciences and is affiliated with the entomology department of St. Petersburg State University, where he received his Ph.D. in 1986. Though principally employed to conduct research, Lukhtanov has taught a number of courses from forest entomology to molecular evolution and phylogenetics, and advised many graduate students, who are now working in Belgium, Russia and the United States. Lukhtanov has published a book on butterflies of northwest Asia and written dozens of professional articles, including a paper in *Nature* that was rated by the journal *Science* as one of the main scientific breakthroughs of 2005.

Lukhtanov has organized and participated in 35 entomological expeditions to different, poorly explored regions of Armenia, Azerbaijan, China, Georgia, Iran, Kazakhstan, Kyrgyzstan, Russia, Uzbekistan, Tadjikistan, Turkey and Turkmenistan. During these expeditions, he has studied numerous butterfly and moth species with a special focus on ecology and analysis of contact and overlap zones between closely related taxa. He uses these field studies for delimitation of species boundaries and employs a wide array of taxonomic tools in his research, from traditional morphological museum-based studies to the most modern methods of molecular systematics.

One of Lukhtanov's main interests is the phenomena of speciation, especially interactions between chromosomal change and evolution of pre-zygotic reproductive isolation and their role in generating species diversity. Recently he and his research group pioneered the use of new methods in analysis of molecular data for phylogenetics. Lukhtanov also is researching revisionary taxonomy, systematics, phylogenetics and phylogeography of Palearctic butterflies, with special attention to the complicated and species-rich genera of Lycaenidae (e.g., *Polyommatus*), satyrine nymphalids (e.g., *Coenonympha*, *Oeneis*) and Papilionidae, specifically the genus *Parnassius*.

McGuire Center: Vladimir Lukhtanov is a visiting scientist and curator at the McGuire Center, working on Palearctic butterflies. He has contributed tremendously to the curation of Blues, Coppers and Hairstreaks (Lycaenidae) of the Old World.

TOP AND BOTTOM LEFT: Vladimir Lukhtanov conducts field work in Central Asia.
TOP AND BOTTOM RIGHT: These Polyommatine Blues are part of the McGuire Center collections.

STAFF PROFILE: Keith Willmott

Keith Willmott received a first-class honors bachelor's degree in natural sciences from Cambridge University in the U.K. After completing his Ph.D. at the University of Florida in 1999, Willmott began a three-year postdoctoral position at the Natural History Museum in London, working with Jim Mallet on the evolution of ithomiine butterflies and the role of mimicry in speciation. In July 2005 he returned to Gainesville as assistant curator of Lepidoptera at the McGuire Center.

Willmott's primary interest is in butterfly diversity – how it is distributed, what controls its patterns, how species within a community are related, how they evolved and how they should be conserved. Over the last 20 years he has spent about four and a half years in the field, usually between one and three months at the time. In addition to various short collecting visits to the Neotropics, Africa and Asia, he spent two months in Indonesia in 2000 working for Operation Wallacea and conducting inventories in unexplored areas of southeastern Sulawesi and the adjacent islands of Buton and Kabaena. He also supervised students conducting short projects in butterfly ecology as part of the Operation Wallacea program. Since 1991, Willmott has spent one to three months per year in Ecuador (17 trips, totaling around 40 months), working with colleague Jason Hall on a long-term study of the systematics and biology of that country's butterflies. Most of these trips involve using standard net and bait-trap methods to sample in poorly known regions of the country. His work has helped expand the knowledge of butterfly distribution and build collections for systematic research. The results will be published as a series of books, with the first volume due to cover about 650 species in the Papilionidae, Pieridae and several subfamilies of Nymphalidae. Willmott and Hall are publishing descriptions of all new species in journal articles before the books appear in print. In their current research, they are using mitochondrial DNA sequence data to determine relationships in particularly complex groups and to define species. The series will have five volumes, with the last planned as a summary field guide containing 2,700 species. They also continue to compile distribution data to produce species range maps for publication in the guide. Willmott believes this field guide will greatly facilitate research on tropical Andean butterflies, which are the world's richest and most poorly known fauna.

Keith Willmott conducts field work in Anangu, Ecuador in 2005.

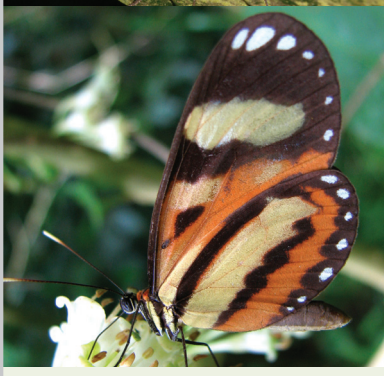
Willmott has also made three in-depth studies of local butterfly communities in Ecuador with colleagues Marianne Elias, Chris Jiggins, and Julia Robinson Willmott. These visits involved gathering information on ithomiine butterflies, host plants, bird predators and microhabitat distribution to test various hypotheses about the roles of mimicry and niche partitioning in the evolution of the group.

In addition to completing his Ecuador books, Willmott would like to build on the achievements of the Tropical Andean Butterfly Diversity Project, in which he worked with Blanca Huertas, Gerardo Lamas, Jim Mallet and many South American, North American and European colleagues and institutions. The project identified key areas for research and conservation in the tropical Andes. Willmott hopes to establish long-term inventories in some of these regions and conduct rapid inventories in other priority sites threatened by development, in addition to continuing to assess the threat status for each species. In the field of systematics, Willmott is seeking funding with a number of colleagues from the Florida Museum and other institutions to tackle the Euptychiina, a large and complex group of satyrine butterflies. Several smaller systematics projects (e.g., molecular phylogeny of *Adelpha*) are also in the planning stage.

McGuire Center: At the McGuire Center, Keith Willmott conducts his research in butterfly systematics, ecology, evolution, biogeography and conservation, mainly focusing on the Neotropical region, and publishes in peer-reviewed journals. He also spends a significant portion of time planning and preparing for fieldwork and applying for and managing grants. His curation activities focus on Neotropical butterflies, especially in the Papilionidae, Pieridae and Nymphalidae. He supervises a number of volunteers who help with curation and development of databases. Willmott teaches a variety of courses, including insect biogeography, macroecology, biology of Lepidoptera and evolutionary biogeography. As an adjunct faculty member in the department of entomology and nematology, Willmott also supervises several master's and doctoral students.

Adelpha cytherea, Brazil

Keith Willmott conducting canopy studies in Anangu, Ecuador



Ithomiine butterfly, *Pteronymia aletta* (Ecuador) (top); *Hypothyris* sp. (Brazil)

STAFF PROFILE: Jacqueline Y. Miller

Jacqueline Miller

Jacqueline Y. Miller received her Ph.D. in zoology from the University of Florida in 1986. She served as a curator of the Allyn Museum of Entomology in Sarasota, and together with her late husband Lee Miller created one of the best world Lepidoptera collections, now part of the McGuire Center's collection. While in Sarasota, Miller also served as an adjunct faculty member at New College and held affiliate professor positions in the UF departments of biology and entomology.

Miller's interests broadly range across systematics, taxonomy, biogeography, and life history of Lepidoptera, especially in the Castniidae, Hesperioidea, and Nymphalidae. Her past and current research efforts have focused primarily on revisionary studies of Neotropical taxa in these groups, emphasizing unique diagnostic morphological features and integrating ecological and behavioral observations when applicable. Her research studies have also concentrated on phylogenetic analysis and vicariance biogeography of Lepidoptera, especially of endemic genera in the West Indies and Caribbean Basin. These investigations have led to a better understanding of the higher taxonomic categories and evolutionary history of Lepidoptera.

Depending on the project and time available, Miller spends two or three weeks in the field each year. Some years involved longer periods (up to seven weeks), as was the case when she was working on the book, *Butterflies of the West Indies and South Florida*. During that time, she visited and worked on most of the major islands in the Greater Antilles and the Lesser Antilles. She also has conducted field work in Brazil, Costa Rica, Mexico, Peru, South Africa and Venezuela. Most recently, she has conducted field work in the Bahamas and Honduras. The focus of her field work has generally been on the biodiversity of Lepidoptera (especially butterflies) within a particular locality, noting major plants, nectar resources, GPS coordinates and elevation, and also ecological niche modeling. Since a number of the Lesser Antilles had never been surveyed, Miller and her colleagues focused on species richness and turnover on these islands. In many cases, there are microhabitats in which some species in the Greater Antilles had not been collected in more than 30 or 40 years.

Miller has completed and published papers on biodiversity surveys in different areas of Mexico and elsewhere in the Neotropics, which have served as timelines for current comparative surveys. She collaborated with Carmen Pozo of Mexico to create a database of Mexican butterflies. This database of specimens in the McGuire Center collections has been expanded to include type specimens, moths from Paynes Prairie surveys, vouchers for molecular studies and other groups of interest.

Currently, Miller is working on a biodiversity survey of Honduras Lepidoptera. She has written two papers on the subject and has a provisional checklist in progress, which soon will be submitted for publication. Voucher specimens from this project account for about

Jackie Miller takes a break during field work in Honduras.

3,000 species to date. She is collaborating with Daniel H. Janzen (Costa Rica), Jean-Michel Maes (Nicaragua) and other lepidopterists in Belize, El Salvador and Guatemala. She has become particularly interested in the micro-Lepidoptera, as these small moths offer more opportunity for the discovery of new species. Based on the species richness in surrounding countries, the project should ultimately include at least 6,000 species of Lepidoptera in Honduras. Although Janzen, DeVries, and others in Mexico have made major inroads on the biodiversity of Lepidoptera in Mesoamerica, Honduras is of major interest, as no comprehensive studies have been published on the area's Lepidoptera. Miller wants to document these species and review them in light of the historical geology and biogeography of the region. Surveys like the one she is conducting in Honduras are useful because Lepidoptera are excellent bioindicators of habitat health and floral biodiversity.

McGuire Center: Jacqueline Miller currently serves as the Allyn Curator for Lepidoptera and associate director of the McGuire Center. Her duties include curating the collection, preparing specimens derived from her field work and teaching as a guest lecturer for the biology of Lepidoptera and principles of systematics courses. She oversees the research collections and works with collections coordinator Andrei Sourakov and senior collections manager Andrew Warren in addition to other curators and staff. Last year, Miller and her colleagues received 44 collection donations, and this number reflects the McGuire Center's typical annual collections growth since its opening in 2004. Miller currently serves as chair of one committee and is a member of five other graduate student committees. She also serves on five Museum committees and two University committees, is editor of the *Bulletin of the Allyn Museum* and serves on the editorial board of the *Bulletin of the Florida Museum of Natural History* and the *McGuire Center News*. Miller also is a member of 13 professional organizations and an elected fellow of the Entomological Society of America.

Day-flying Neotropical moths of the family Castniidae

STAFF PROFILE: Deborah Matthews

Deborah Matthews received her master's (1989) and doctorate (2006) from the University of Florida department of entomology and nematology. Before moving to Gainesville, she received a bachelor's in biology from New College in Sarasota, where she also worked as a technical assistant at the Allyn Museum of Entomology. As a graduate student, Matthews was involved in surveys of insects associated with aquatic and terrestrial weeds, and of the general Lepidoptera fauna of Florida. Through graduate coursework and the teaching and example of her advisor, Dale Habeck, she acquired an armory of skills in rearing and collecting techniques and methods for description and identification of caterpillars, as well as a deeper appreciation for the intricate details of insect morphology and natural history.

Field work has been an essential part of Matthews' research. She spent time in the field on a weekly basis during her graduate studies and her work as a graduate assistant, with two or three weeks in the summers devoted to out-of-state collecting, including trips to the western United States. Her recent field work includes trips to Honduras to inventory the biodiversity of Lepidoptera and study life histories of Neotropical moth species such as the plume moth, *Michaelophorus nubilus*, which as larvae, feed on leaves of the chocolate-producing cacao tree. In addition to work with collections, Matthews is most interested in the life histories and immature stages of micro-Lepidoptera, especially plume moths (family Pterophoridae). Trips through cow camps and swamps of south Florida, to North Carolina and upstate New York, combined with trips to the Rocky Mountains and southwestern United States, have played a vital part in her ability to describe the life histories of more than 87 species of plume moths, representing more than half of the Nearctic fauna.

Matthews plans to continue working on projects associated with Lepidoptera biodiversity inventories, including publications based on her graduate studies. Her future work will involve refinement of the higher classification of Pterophoridae and revisionary studies of problem genera, based on analysis of molecular data and morphological characteristics of adults, larvae and pupae. Matthews also plans to expand her faunal studies of Neotropical Pterophoridae to include the plume moth fauna of Central America and the Caribbean Basin.

Matthews is an active member of several organizations, including the Southern Lepidopterists' Society. One of the group's recent outreach activities included exhibiting live caterpillars during the Florida Museum's annual ButterflyFest. Visitors of all ages enjoyed a close look and the opportunity to touch or hold live caterpillars, often for the first time, and to observe examples of the adult moths that result from these caterpillars. During ButterflyFest, Matthews also co-teaches a butterfly rearing workshop.

McGuire Center: Deborah Matthews works as a biological scientist with curator Jacqueline Miller. Her responsibilities include assisting with field work, identifications and processing specimens collected in surveys. She also prepares articles for publications and maintains and databases special collections. Matthews also curates the Pterophoridae section of the McGuire Center's collection, and works as a photographer, editor, designer, illustrator and preparator.

Deborah Matthews educates children about butterfly rearing during ButterflyFest 2010.

Deborah Matthews collects plume moth larvae of *Oidaematophorus balsamorrhizae* on Balsamroot flowers in Wenatchee National Forest, Washington.

This plume moth caterpillar, *Oidaematophorus balsamorrhizae*, was photographed in Washington.

A newly emerged Cacao Plume Moth, *Michaelophorus nubilus*

A plume moth specimen in the collections

Various Pyralid moth specimens.

STAFF PROFILE: James Hayden

In 1999, James Hayden completed an associate's degree in liberal arts at Deep Springs College in the high eastern desert of California, an area notable for unique entomofauna. In 2003, he finished his bachelor's in environmental biology at Columbia University while simultaneously volunteering at the American Museum of Natural History. Influenced by Alma Solis' writing on the group, Hayden decided to study pyraloid moths. He entered a Ph.D. program in entomology at Cornell University where he revised the mainly tropical pyralid subfamily Odontiinae. His revisions of the larger Neotropical genera *Dicepolia* Snellen and *Cliniodes* Guenée are published or in press. Hayden spent a year as the Rea Postdoctoral Fellow at the Carnegie Museum of Natural History, where he produced papers on unusual pyraloid species from the Greater Antilles, taking advantage of the Carnegie Museum's extensive Caribbean collections. Halfway through his postdoc term, Hayden switched his efforts to the broad morphological study of various Pyraloidea species, as he realized the freedom for research afforded by the postdoctoral position was a unique opportunity to familiarize himself with his favorite group.

James Hayden works in the McGuire Center collections.

Hayden admits he primarily has been a collections-based researcher and spent little time on fieldwork. The exception includes his undergraduate thesis, when he sampled macro-moths from three ecosystems (mixed forest, salt marsh and northern pine barrens) in Maine. He also collected in the western United States in 2003 and southeastern Arizona in 2005. In summer 2007, he traveled widely in the eastern U.S. and Canada as well as Puerto Rico in search of *Metrea ostreonalis,* the endemic representative of *Cliniodes*. Most of his efforts, however, have been spent visiting more than 20 collections on three continents.

Hayden's primary interest is systematics of Pyraloidea at all levels, from species to subfamily relationships. Pyraloidea, or snout moths, is one of the five largest radiations of Lepidoptera with 16,000 described species and an estimated 32,000 undiscovered species. It is the most ecologically diverse group of Lepidoptera in terms of larval habits and is second to Noctuoidea in economic and agronomic impact. Most Pyraloidea genera badly need systematic revision and there is a high demand for identifying species in the collections and for the purposes of pest control. Hayden is currently finishing two revisions of small Caribbean genera and collaborating on the morphological commentary for a paper on pyraloid phylogeny funded by the NSF Lepidoptera Assembling the Tree of Life grant, www.leptree.net. As part of this project, he has written web pages and contributed images for several subfamilies included in the Encyclopedia of Life, www.eol.org.

James Hayden conducts taxonomic research in the lab.

Hayden's major goal is to publish identification materials to facilitate systematic revisions of Pyraloidea. The only global identification keys available for the family are the revisions of George Hampson (1895–1899), which rapidly became untenable after being published. Hayden's identification tools will take advantage of electronic media as much as possible while respecting norms of publication. He aims for all character systems: morphology of adults and immature stages, behavior and molecular evidence that is informative at all phylogenetic levels, including but not limited to DNA barcodes. Hayden hopes to explore Florida in the future and is excited to be working in the state, in part because Pyraloidea is mainly a tropical group and Florida is at the doorstep of the tropics. He also hopes to work as an adjunct professor at UF to teach and advise graduate students.

McGuire Center: James Hayden is the curator of Lepidoptera for the Florida State Collection of Arthropods, which is housed at the McGuire Center. Hayden conducts taxonomic research, curates collections, and as a Florida Department of Agriculture and Consumer Services, Division of Plant Industry employee, is responsible for providing timely and accurate identifications of Lepidoptera samples sent to DPI. These samples are mainly crop pests, but Hayden handles many types of inquiries.

STAFF PROFILE: Andrei Sourakov

Andrei Sourakov studied medicine in Moscow for two years and then transferred to the biology department of Moscow State University, majoring in entomology and pursuing professionally his avocation as a lepidopterist. After moving to the United States in 1991 he volunteered at the American Museum of Natural History, where he received additional training in Lepidoptera taxonomy, and worked on his first taxonomic revision of a genus of hairstreak butterflies. He received his M.S. (1994) and Ph. D. (1997) in entomology from the University of Florida, where he also worked as a teaching and research assistant and participated in many Lepidoptera ecology, systematics and conservation projects.

Andrei Sourakov

In 1998, Sourakov spent a year as a postdoc at the California Academy of Sciences, San Francisco. He later worked for the USDA's Center for Medical, Agricultural and Veterinary Entomology, where his primary focus was on biological control -- using wasp parasitoids to control pests. During this time, he helped plan the McGuire Center's construction and exhibits. Since 2002, he has been a member of the McGuire Center exhibits committee and participated in the production of McGuire Center exhibits as a scientific consultant, writer, photographer and preparator. After the McGuire Center opened, Sourakov had more time for teaching and working in the collections. In 2009, he was accepted as a member of the graduate faculty in UF's department of entomology and nematology.

Most of Sourakov's field work consists of expeditions to collect specific groups of butterflies and study their ecology, or broad surveys of all Lepidoptera in a specific area. His field work outside the United States has taken him to Caucasus (Armenia and Dagestan), Central Asia (Kazakhstan, Kirgizstan, Tajikistan, Turkmenistan and the Altai Mountains), the Russian Far East and Crimea, a number of Latin American countries from Argentina to Costa Rica, and other exotic places.

Sourakov's interest in Lepidoptera ranges from ecology (specifically autecology and community ecology) to systematics, including traditional, morphology-based taxonomy and phylogenetics as well as DNA-based methods, such as the DNA-barcoding. He believes Lepidoptera are an excellent model group for answering broad biological questions in many fields such as evolution, genetics, ecology and systematics, largely thanks to the tremendous pool of knowledge and collections created by amateur lepidopterists. He is also interested in insect photography and in popularizing nature to general audiences. Sourakov tries to promote appreciation and conservation of insects through photography, filming and popular writing.

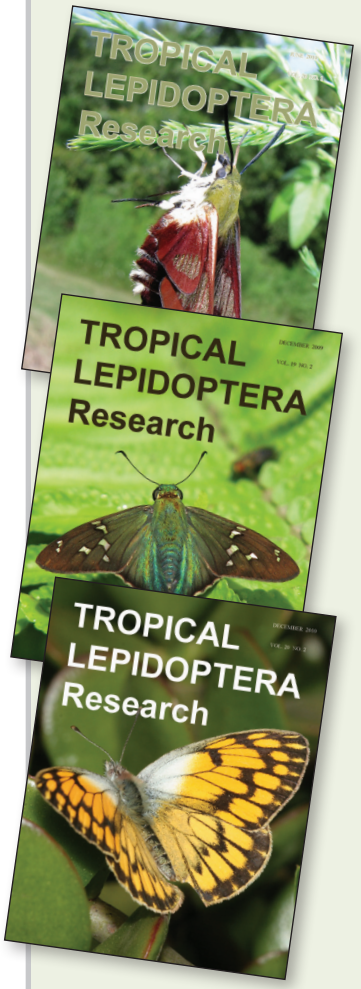
Sourakov also is participating in a collaborative project on DNA barcoding of Palearctic butterflies with Russian and Canadian scientists to explore geographic variations in mitochondrial DNA and its effectiveness for species identification. The first phase was published in 2009 in Molecular Ecology Resources. He also has been examining the morphology, genetics, ecology and biogeography of a West Indian butterfly genus *Calisto*, which he views as a model group for studying the process of speciation. With the late George Austin, former McGuire Center collections manager, Sourakov worked on phenology and species richness of moths in North Central Florida. He continues this project on his own and is particularly interested in ecological niche partitioning by the 1,500 or more moth species in the Gainesville area.

McGuire Center: Andrei Sourakov curates collections and writes grant proposals, which enable the McGuire Center to purchase collections supplies and pay technical personnel. He also conducts research, publishes in peer-reviewed journals and supervises graduate students in the department of entomology and nematology. Sourakov also assists in producing Museum exhibits and instructs volunteers and interns working in the collections. As a public service he lectures in area schools about butterfly biology and the work of the Florida Museum and McGuire Center.

Sourakov also has taught several UF classes, including techniques in Lepidoptera research and scientific illustration of Lepidoptera. He and colleague Keith Willmott recently taught biology of Lepidoptera, a seminar course exploring Lepidoptera as objects of research in a broad range of disciplines. He also occasionally gives guest lectures in courses offered by other instructors, including honors study in Lepidoptera biology and insect conservation.

Calisto obscura

Calisto lyceius, Domincan Republic



Since 1998, Sourakov has served as editor of an international peer-reviewed journal, Tropical Lepidoptera Research.

Charles Covell

Examples of Covell's favorite geometrid moths

Metalmark butterfly, *Rhetus periander*, Ecuador

JD Turner collects riodinid butterflies in the field.

STAFF PROFILE: Charles Van Orden Covell, Jr.

Dr. Charles Van Orden Covell, Jr. received his BA in English at the University of North Carolina at Chapel Hill in January, 1958. He began working as an English teacher and soccer coach at the Norfolk Academy in January 1958. In 1960 he became a Graduate Research Assistant and Graduate Teaching Assistant in the Virginia Tech Department of Entomology. In 1962 he received his MS in Entomology, then his PhD in Entomology three years later. In 1964 he began his career as a professor of entomology in the Biology Department at the University of Louisville, Kentucky, and in 2004 retired and moved to Gainesville to begin a part-time career at the McGuire Center.

Covell began collecting butterflies and moths at age 13 in North Carolina and has spent countless hours in the field. He is interested in all Lepidoptera groups, with emphasis on butterfly families Lycaenidae and Riodinidae, and the moth family Geometridae. During the '60s and '70s, Covell conducted Lepidoptera surveys in south Florida, including documenting the occurrence of the Schaus Swallowtail, which helped in it being listed as the first threatened and later endangered insect by the U.S. Fish and Wildlife Service. He has participated in numerous collecting trips to Bolivia, Brazil, Costa Rica, the Dominican Republic, Ecuador (including the Galapagos Islands), French Guiana, Guatemala, Honduras, Irian Jaya (New Guinea), Malaysia, Mexico, Panama, Peru, Taiwan and Venezuela. Covell also conducted Lepidoptera surveys in North Carolina and Virginia. In 1965 he began a butterfly survey of Kentucky, visiting all 120 counties by July 1974 and publishing a faunal list in 1999. Covell still leads an annual Fourth of July Butterfly Count near Louisville, Ky., and participates in Lepidoptera faunal studies of the Andes, Honduras and Paynes Prairie Preserve State Park in Florida. He is completing a taxonomic revision of the North American species of the geometrid moth subfamily Sterrhinae, and recently served as an adviser for a graduate project that involved revising genera from this subfamily.

Covell is a past president, honorary life member and current archivist of the Lepidopterists' Society, and received the Southern Lepidopterists' Society John Abbot Award in 1982 for his major contributions to the knowledge of Lepidoptera. He remains an active member of the Kentucky Academy of Science and the Society of Kentucky Lepidopterists, which he founded. Throughout his career, Covell taught courses in zoology and entomology and advised numerous students. He authored and co-authored professional papers on a variety of insects, including bees, flies, mosquitoes, plant bugs, scorpionflies, many aquatic insect groups, and, of course, butterflies and moths. He also is author of *The Field Guide to Moths of Eastern North America*, released in its second edition in 2005.

McGuire Center: At the McGuire Center, Covell curates macro moths and continues to contribute new material to this collection through periodic collecting trips. He advises graduate students, supervises volunteers engaged in moth curation, and has served as a coordinator of the McGuire Center's seminar program since fall 2004. In 2010 he hosted an international conference on geometrid moths, the Forum Herbulot.

STAFF PROFILE: Jon D. Turner

Jon "J.D." Turner is a retired cardiologist who practiced in the Huntsville, Ala., area from 1979 until 2010. His lifelong interest in Lepidoptera was revitalized in 1988, when he once again began taking research field trips. He has conducted field studies in Central and South America, Irian Jaya, Madagascar, Russia and the Solomon Islands. He also has studied hill-topping behavior of swallowtail butterflies in Tennessee and diversity and behavior of metalmark butterflies (Riodinidae), and recorded the heartbeat of butterflies and moths using a Doppler transducer (normally used to measure coronary artery blood flow in humans). His field work on metalmark butterflies includes long-term behavioral studies, with his voucher specimens for these and his molecular phylogenetics studies added to the Museum collections. Turner has conducted field work and collaborated with a number of professional lepidopterists, including Thomas Emmel, Jason Hall, Daniel Janzen, Andrei Sourakov, Andy Warren, Keith Willmott and the late George Austin. Since the 1990s he has been highly active in rainforest conservation efforts, particularly in Rondônia, Brazil, and supported the Schaus Swallowtail endangered species project in south Florida.

Turner currently works as a senior research associate and curator of Riodinidae at the McGuire Center. In addition to curating Riodinidae, he plans to continue his behavioral studies of metalmark butterflies. His recent field work has included faunal surveys in Argentina, Ecuador, Honduras and Isla de Cedros in Mexico. Turner wants to increase the amount of time he spends in the field both inside and outside the United States, and hopes to continue participating in faunal survey projects.

McGuire Center: Jon D. Turner is a senior research associate and curator of Riodinidae at the McGuire Center.

J.D. Turner identifies specimens in South America.

STAFF PROFILE: John B. Heppner

John Heppner received his B.S. from Berkeley, where he studied entomology under the guidance of Jerry Powell. He received his Ph.D. from the University of Florida, and while at UF, was awarded a pre-doctoral fellowship from the Smithsonian Institution, where he completed his graduate studies on the micromoth family Glyphipterigidae. From 1978 to 1982, he served as a curator of micro-Lepidoptera at the National Museum of Natural History at the Smithsonian, and in 1983 became a Lepidoptera curator at the Florida State Collection of Arthropods, Florida Department of Agriculture, Division of Plant Industry.

Heppner is a research associate of the Smithsonian Institution and a UF entomology adjunct professor. He is an honorary member of the Hungarian Entomological Society, a Fellow of the Royal Entomological Society of London, and a member of several other entomological societies.

For 18 years prior to 2008, Heppner served as publications editor for the Association for Tropical Lepidoptera, editing journals Tropical Lepidoptera, Holarctic Lepidoptera, ATL News and ATL Notes. He edits a series of monographs entitled Atlas of Neotropical Lepidoptera. He also edited many publications for the Florida State Collection of Arthropods, including the 2003 catalog of the Lepidoptera of Florida – a monumental work nearly 700 pages long that includes a checklist and host plant information for many species. In addition to descriptions of many new species, mainly in the families Choreutidae and Glyphipterigidae in North and South America and Southeast Asia, Heppner published many new distribution records, a manual on classification of Lepidoptera, dozens of articles for the Encyclopedia of Entomology covering most of the Lepidoptera families, and a popular book on monarch butterflies.

Heppner has travelled extensively in search of micro moths and other insects both in the U.S. and abroad, with particularly long stays in Ecuador, Guatemala, Hungary, Indonesia, Peru, Romania, Taiwan, Venezuela and Vietnam. He is working on faunal papers on moths of Chile, Guatemala, Panama, Peru and Vietnam, as well as descriptions of many new species. Florida moths have also been a large focus of his work in recent years. As a result, he has become one of the main contributors to the growth of the Lepidoptera holdings in the Florida Sate Collection of Arthropods and was instrumental in merging this collection with the UF collection following the opening of the McGuire Center.

McGuire Center: In 2011, John Heppner joined the McGuire Center full time as a curator for micro-Lepidoptera after six years as a joint curator of Lepidoptera and immatures for the Florida Sate Collection of Arthropods and McGuire Center. He also conducts research and taxonomic surveys around the world and has served on the graduate committees of several Ph.D. students in the department of entomology and nematology, where he is a courtesy professor.

John Heppner

The bella moth, *Utetheisa ornatrix*

STAFF PROFILE: Andrew D. Warren

Andy Warren received his B.S. with honors from Cornell University, where he worked on several butterfly projects and initiated formal research on Mexican butterflies. His honors thesis included a revision of a Neotropical skipper genus, *Eantis*. He later conducted his Ph.D. research on the higher-level classification of the skipper butterflies of the world at Oregon State University, graduating in 2006.

Warren grew up in Colorado, collecting butterflies since the age of 4. His interest in butterflies intensified and from 1986 to 1998 he made annual summer collecting trips to Wyoming. He also has collected extensively in Arizona, Idaho, Montana, New Mexico, South Dakota and Utah. In graduate school, Warren collected throughout Oregon as well as in neighboring regions of Washington and California, and in 2005 published a book on the butterfly fauna of Oregon. He has conducted fieldwork in Georgia, Hawaii, Illinois, Nebraska, New York, Oklahoma, Tennessee, Texas, and more recently, Florida. He has made single trips to Alberta and Ontario and more than 40 to Mexico. From 2007 to 2009 Warren lived in Mexico City intermittently while conducting fieldwork in nearly all the Mexican states. His fieldwork on butterflies has also taken him to the Bahamas, Brazil, the Cayman Islands, Colombia, Dominican Republic, Ecuador, England, Jamaica, Kenya and Netherlands Antilles (Curaçao). Warren's fieldwork has primarily involved sampling of adult butterflies for faunal surveys and revisionary studies, targeted searches for undescribed species and life history studies.

The general theme of Warren's research is the biodiversity of the Mexican and Central American butterfly fauna, especially skippers (family Hesperiidae), with a special focus on Mexican fauna. He has published faunal surveys for several Mexican states, as well as descriptions of nearly two dozen new butterfly species. Another aspect of his research is higher-level phylogenetic studies of skippers, using molecular and morphological data. Warren recently proposed a revised nomenclature for the world's fauna of Hesperiidae, which was published in Systematic Entomology in 2009. He has participated in a number of phylogenetic studies of various groups of nymphalid butterflies, and recently co-authored an article in the Proceedings of the National Academy of Sciences on the physiology of vision in *Heliconius* butterflies.

Warren is also intensely interested in all butterflies of the Americas and encourages anyone interested in Lepidoptera to visit his website, www.butterfliesofamerica.com, the world's most comprehensive online collection of butterfly information and images. The Butterflies of America project aims to ultimately illustrate all butterflies of the New World. The website features more than 5,100

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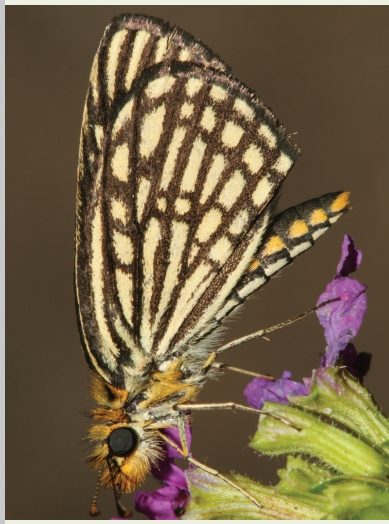
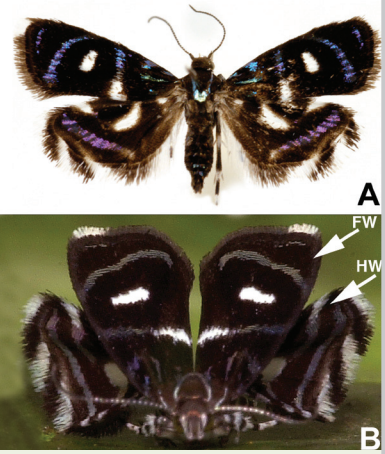
Andrew Warren works in Mexico.



Skipper, *Metisella willemi,* Kenya



Jadranka Rota found that a metalmark moth in the genus *Brenthia* (A) can pose as a jumping spider, assuming not only its appearance (B), but also the spider's territorial behavior.

Choreutis cyanotoxa (Choreutidae)

Jadranka Rota works in the field.

Apple Ermine Moth, *Yponomeuta malinellus* (Yponomeutidae)

Kyu-Tek Park

STAFF PROFILE: Jadranka Rota

Jadranka Rota will begin at the McGuire Center as an assistant curator following her current postdoctoral fellowship at the Natural History Museum of Denmark in Copenhagen, where she is working closely with the famous morphologist Niels Kristensen. Rota brings expertise in both molecular and morphological systematics, which she developed during her graduate work at the University of Connecticut (M.S. 2003, Ph.D. 2007) and as a postdoc at the Smithsonian Institution.

Rota's research focuses on molecular phylogenetics, alpha taxonomy, behavioral ecology and comparative morphology of the metalmark moths (Choreutidae) and two leaf-mining families, Acanthopteroctetidae and Tischeriidae. Her work, specifically on behavior, was covered by BBC Wildlife Magazine and the Discovery Science channel. Rota plans to continue working on systematics of various groups of micro-Lepidoptera, expanding her research to other families.

Rota's contributions to the scientific community are numerous, including curating pages of the Encyclopedia of Life, serving as editor of the journal Zootaxa and being an active member of eight societies dedicated to the studies of entomology, biology or systematics. She has been involved in various community outreach programs, including the Connecticut BioBlitz in 2002, 2004 and 2006. Rota also had an opportunity to teach laboratory courses in biology, general and medical entomology and systematics during her graduate studies at the University of Connecticut.Rota's field work, which originated with a survey of butterflies of Paklenica

New assistant curator Jadranka Rota works in the field.

National Park in Croatia, has taken her to Costa Rica, Florida, New Mexico and the Smoky Mountains. At the Great Smoky Mountains National Park, she served on the All Taxa Biodiversity Inventory project and as a member of BioBlitz. She also was a resource scientist for the Costa Rica La Selva Biological Station "boot camp" during the 50th anniversary celebration of the Organization for Tropical Studies in 2003.

She has broad experience in natural history museum settings, including working as a staff member or visiting scientist at museums in Austria, Costa Rica, Croatia, Great Britain, the Netherlands, New York and Washington, D.C.

McGuire Center: Jadranka Rota will begin at the McGuire Center in January 2012 as an assistant curator of Lepidoptera, and will conduct research, teach and help curate the collection.

STAFF PROFILE: Kyu-Tek Park

Kyu-Tek "K.T." Park received his M.S. in zoology from Hyung-Hee University and a Ph.D. in entomology from Seoul National University in 1983. After graduation, Park worked as a professor at Kangwon National University in Korea for 25 years. He maintains a close association with the university, where he also served as the dean of the College of Agriculture. Since 2007, Park has worked most of the year at the McGuire Center, where he sometimes curates micro-Lepidoptera, but mostly conducts taxonomic research. This year he published 16 professional articles on various groups of moths, including Lecithoceridae, Notodontidae, Oecophoridae, Pterophoridae and Yponomeutidae,

Park is actively involved in development of the entomological knowledge in Korea. Starting in the '70s, he served 12 years as a director of the Entomological Society of Korea and 14 years as editor-in-chief of the journal Insecta Koreana. He also served as president of various societies, including the Korean Biodiversity Council, Korean Society of Applied Entomology and Korean Society of Systematic Zoology. In 1991 he organized the First International Symposium of CIS, Biodiversity Research in Korea; in 2002, the First Bilateral Symposium on Biodiversity Research in the Korean Peninsula; and in 2005, the Fifth Asia Pacific Conference of Entomology. Park also is a fellow and vice president of The Korean Academy of Science and Technology.

Park has authored or co-authored more than 30 books and monographs on the subjects of general entomology, including the Illustrated Catalogue of Tortricidae in Korea, Gelechiidae in the Korean Peninsula and Adjacent Territories, and Guide to the Insects of Taiwan. He also has authored or co-authored more than 270 scientific journal articles describing more than 400 new species and 10 new genera.

Park's fieldwork experience is extensive, spanning 40 years. He has worked in Northern China (1999-2002), Northern Vietnam (2002-present); Thailand and Philippines (2005-present); and New Guinea (2010-present). Park is one of the few remaining taxonomists trained in traditional morphological systematics of micro-Lepidoptera and is able to not only continue his research, but advise new taxonomists. His main goal, however, is to review the worldwide fauna of the family Lecithoceridae.

McGuire Center: Kyu-Tek Park curates and conducts research on micro-Lepidoptera six months a year at the McGuire Center, splitting the rest of the time between his continuous involvement in the scientific life of South Korea and his field work in East Asia.

STAFF PROFILE: Jaret C. Daniels

Jaret Daniels received his B.S. in biology from St. John's University in Collegeville, Minn., in 1990 and his Ph.D. in entomology from the University of Florida in 1999. His Ph.D. dissertation focused on mechanisms of seasonal variation found in sulphur butterflies of the genus *Eurema*. During the same time, Daniels managed a project on captive propagation and reintroduction of the endangered Schaus Swallowtail butterfly. Working out of the Boender Endangered Species Laboratory on UF campus, he was responsible for breeding live cultures, caring for host and nectar sources, collecting data and writing reports to the granting agencies. He participated and supervised reintroduction of the endangered species into the wild and conducted annual surveys of its status following the reintroductions.

After graduation, Daniels was hired as a curator of Lepidoptera and research for the Butterfly Kingdom Conservatory and Invertebrate Science Teaching and Research Center on Hilton Head Island, S.C. He was responsible for the development of captive breeding and support plant nursery facilities, oversight of in-house native and non-native Lepidoptera livestock production programs, exhibit planning and design, conservatory and outdoor garden concept development and website design and development. He also coordinated board development for the non-profit INSTAR Center and initiated and directed invertebrate research and conservation programs. Daniels also developed adult and school education programming and assisted with facility and site design. He later brought his expertise back to Gainesville and was responsible for the development of various research programs at the McGuire Center for Lepidoptera and Biodiversity, including the oversight of field and laboratory research on the endangered Miami Blue butterfly. His current focus is on conservation biology of imperiled Lepidoptera, but his primary academic research interests remain broad and include conservation and population biology, ecology, life history, behavior, biodiversity, seasonal ecology and polyphenism.

Jaret Daniels releases butterflies in the Butterfly Rainforest exhibit.

McGuire Center: Jaret C. Daniels has a joint appointment with the Florida Museum of Natural History as assistant director of exhibits and public programs and assistant curator of Lepidoptera, and the entomology and nematology department, where he serves as an assistant professor, teaching courses and supervising graduate students. He remains involved in programs focused on imperiled butterfly recovery and native insect pollinator conservation. He also works on a number of nationwide initiatives related to advancing insect conservation, conducting professional training workshops, developing conservation-related educational materials and working with various stakeholder groups.

STAFF PROFILE: Thomas C. Emmel

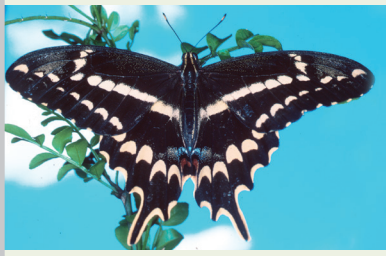
Thomas C. Emmel is director of the McGuire Center for Lepidoptera and Biodiversity, as well as professor of zoology and entomology, and curator of natural sciences with the Florida Museum of Natural History. He has served as director of the University of Florida Boender Endangered Species Laboratory since its inception in 1995. His Ph.D. in population biology was obtained under Paul R. Ehrlich at Stanford University, which led to his intense lifelong research interest in ecological and conservation issues. He has also written extensively about the biology, taxonomy, genetics, behavior, and ecology of butterflies and tree snails, and on general biology topics. Author of more than 400 publications, including 35 books, he has worked intensively since 1984 on the endangered Schaus Swallowtail butterfly in the Florida Keys and is currently directing an extensive captive propagation and reintroduction effort to help this endangered species recover so it can be taken off the federal endangered species list. His research on the effects of mosquito control pesticides on non-target wildlife and humans living in south Florida have led to better control measures for the use of pesticides and enhanced wildlife survival.

Some of Emmel's more recent authored or edited books include *Systematics of Western North American Butterflies* (1998); *Butterfly Gardening* (1997); *Florida's Fabulous Butterflies* (1997); chapters in *Swallowtail Butterflies: Their Ecology and Evolutionary Biology* (1995); *Rare and Endangered Biota of Florida. Vol. 4. Invertebrates* (1995) and *Conservation Biology of Lycaenidae (Butterflies)* (1993); *Butterflies of the Florida Keys* (1993); *Florissant Butterflies: A Guide to Fossil and Present-day Species of Central Colorado* (1992); *Mosquito Control Pesticides: Ecological Impacts and Management Alternatives* (1991); *Butterflies* (1991); *Biology* (1989); *Butterflies of California* (1989); *Florida Environmental Guide* (1986); *Biology* (1986); and other works.

McGuire Center: Thomas C. Emmel serves as director of the McGuire Center.

Miami Blue butterfly, *Cyclargus thomasi bethunebakeri*

Winter (top) and summer forms of the Barred Yellow butterfly, *Eurema daira* in Florida.



Schaus Swallowtail, *Papilio aristodemus ponceanus*

Thomas Emmel (right) pictured with Michigan State professor Mark Scriber.

Recent Publications (2010-2011)

Briscoe, A. D., S. M. Bybee, G. D. Bernard, F. Yuan, M. P. Sison-Mangus, R. D. Reed, **A. D. Warren**, J. Llorente-Bousquets and C. C. Chiao. 2010. Reply to Nozawa et al.: Complementary statistical methods support positive selection of a duplicated UV opsin gene in *Heliconius*. Proceedings of the National Academy of Sciences, 107: E97.

Brown, J. W., T. A. Heard, R. Segura, and **J. Rota**. 2011. Leaf-roller moths (Tortricidae) reared from the invasive weed Mexican palo verde (*Parkinsonia aculeata*), with comments on their host specificity, biology, and geographic distribution. Journal of Insect Science, 11(7): 1-17.

Cox J. H., and **T. C. Emmel**. 2010. Ecological surveys of the Lepidoptera fauna of the Hunstein Range, East Sepik Province, Papua New Guinea, emphasizing butterfly populations and habitat in the Mt. Samsai area. Tropical Lepidoptera Research, 20(2): 88-99.

de-Silva, D. L., J. J. Day, M. Elias, **K. R. Willmott,** A**.** Whinnett, and J. Mallet. 2010. Molecular phylogenetics of the neotropical butterfly subtribe Oleriina (Nymphalidae: Danainae: Ithomiini). Molecular Phylogenetics and Evolution, 55: 1032-1041 (May).

Fontes, E., H. Frank, J. Gillmore, and **D. Matthews.** 2010. Dale H. Habeck, 1931-2010. Florida Entomologist, 93(3): 478-479.

Hall, J. P. W., and **K. R. Willmott.** 2010. Discovery of a new *Lucillella* species (Riodinidae: Symmachiini) in the eastern Andes of Ecuador using the single rope canopy access technique. Journal of the Lepidopterists' Society, 64(3): 139-146 (November).

Hardy, D., M. A. Rickard, **A. D. Warren** and N. V. Grishin. 2011. *Achalarus tehuacana* (Hesperiidae: Eudaminae): a new United States record from southern Texas. News of the Lepidopterists' Society, 52(4): 107-111, 127.

Hayden, J. E. 2010. Phylogeny, distribution, and description of a Caribbean species of *Dicepolia* (Lepidoptera: Crambidae). Tropical Lepidoptera Research, 20(2): 77–84.

Heppner, J. B. 2010. Zeller and his "Exotische Microlepidoptera." Lepidoptera Novae (Gainesville), 3(1):1-28.

Heppner, J. B. 2010. Review of the genus *Alinguata* from Venezuela (Lepidoptera: Alucitidae). Lepidoptera Novae (Gainesville), 3(1): 57-59.

Heppner, J. B. 2010. A new species of *Paranthozela* from Peru (Lepidoptera: Tortricidae: Olethreutinae). Lepidoptera Novae (Gainesville), 3(1): 61-63.

Heppner, J. B. 2010. *Loxotoma elegans* in Peru (Lepidoptera: Oecophoridae: Stenomatinae). Lepidoptera Novae (Gainesville), 3(1): 64.

Heppner, J. B. 2010. A new species of *Scythris* from western Peru (Lepidoptera: Scythrididae). Lepidoptera Novae (Gainesville), 3(1): 65-68.

Heppner, J. B. 2010. Riley's metalmark moth, *Hemerophila diva*: a beauty in Florida (Lepidoptera: Choreutidae). Lepidoptera Novae (Gainesville), 3(2): 111-112.

Heppner, J. B. 2010. *Syngamia florella* and its variations in Florida and the Neotropics (Lepidoptera: Pyralidae: Pyraustinae). Lepidoptera Novae (Gainesville), 3(2): 113-118.

Heppner, J. B. 2010. Nearctic metalmark moths, 1. Genus *Phormoestes* (Lepidoptera: Choreutidae: Millieriinae). Lepidoptera Novae (Gainesville), 3(2): 119-124.

Heppner, J. B. 2010. *Scythris medullata* from western Peru, with notes on the family in the Neotropics (Lepidoptera: Scythrididae). Lepidoptera Novae (Gainesville), 3(2): 125-128.

Heppner, J. B. 2010. *Profilinota phillita* in Peru (Lepidoptera: Oecophoridae: Depressariinae). Lepidoptera Novae (Gainesville), 3(2): 129-132.

Heppner, J. B. 2010. Notes on the brachypterous moth, *Pringleophaga kerguelensis*, of the Subantarctic Kerguelen Islands (Lepidoptera: Tineidae). Lepidoptera Novae (Gainesville), 3(3): 133-143.

Heppner, J. B. 2010. The new genus *Rindgeria* and its species in North America and Central America (Lepidoptera: Geometridae: Ennominae). Lepidoptera Novae (Gainesville), 3(3): 149-153.

Heppner, J. B. 2010. *Incawockia*, a new genus and species from Peru (Lepidoptera: Urodidae: Galacticinae). Lepidoptera Novae (Gainesville), 3(3): 154-158.

Heppner, J. B. 2010. Nearctic metalmark moths, 2. Genus *Brenthia* (Lepidoptera: Choreutidae: Brenthiinae). Lepidoptera Novae (Gainesville), 3(3): 159-163.

Heppner, J. B. 2010. Notes on Vietnam moths, 9. Massing of *Vitessa* moths (Lepidoptera: Pyralidae: Pyralinae). Lepidoptera Novae (Gainesville), 3(3): 164.

Heppner, J. B. 2010. Notes on Vietnam moths, 10. Notes on *Wockia* in Vietnam (Lepidoptera: Urodidae: Galacticinae). Lepidoptera Novae (Gainesville), 3(3): 165-168.

Heppner, J. B. 2010. Notes on Vietnam moths, 11. *Propachys nigrivena* (Lepidoptera: Pyralidae: Pyralinae). Lepidoptera Novae (Gainesville), 3(3): 169-171.

Heppner, J. B. 2010. Notes on Vietnam moths, 12. *Ashinaga longimana* in Vietnam (Lepidoptera: Oecophoridae: Oecophorinae). Lepidoptera Novae (Gainesville), 3(3): 172-174.

Heppner, J. B. 2010. Notes on Vietnam moths, 13. *Phycodes taonopa* in Vietnam (Lepidoptera: Brachodidae: Phycodinae). Lepidoptera Novae (Gainesville), 3(3): 175-178.

Heppner, J. B. 2010. Notes on Vietnam moths, 14. *Vespisesia*, a new clearwing genus and species from Vietnam (Lepidoptera: Sesiidae: Sesiinae). Lepidoptera Novae (Gainesville), 3(3): 179-181.

Heppner, J. B. 2010. Notes on Vietnam moths, 15. A new *Cerace* species for Vietnam (Lepidoptera: Tortricidae: Tortricinae). Lepidoptera Novae (Gainesville), 3(3): 182-186.

Heppner, J. B. 2010. Notes on Vietnam moths, 16. A new *Darantasia* from Vietnam (Lepidoptera: Arctiidae: Lithosiinae). Lepidoptera Novae (Gainesville), 3(4): 255-258.

Heppner, J. B. 2010. Notes on Vietnam moths, 17. *Trebania muricolor* in Vietnam (Lepidoptera: Pyralidae: Pyralinae). Lepidoptera Novae (Gainesville), 3(4): 259-261.

Heppner, J. B. 2010. Panama moth notes, 3. *Cotaena plenella* (Lepidoptera: Glyphipterigidae). Lepidoptera Novae (Gainesville), 3(3): 187-190.

Heppner, J. B. 2010. Panama moth notes, 4. A new species of *Taeniostolella* (Lepidoptera: Glyphipterigidae). Lepidoptera Novae (Gainesville), 3(3): 191-193.

Heppner, J. B. 2010. Panama moth notes, 5. Notes on *Darceta falcata* (Lepidoptera: Noctuidae: Agaristinae). Lepidoptera Novae (Gainesville), 3(4): 225-227.

Heppner, J. B. 2010. Fauna of British India, Sphingidae larvae, by Bell and Scott, 1937. Lepidoptera Novae (Gainesville), 3(4): 199-216.

Heppner, J. B. 2010. Notes on the Moluccan and Papuan genus *Cocytia* (Lepidoptera: Noctuidae: Cocytiinae). Lepidoptera Novae (Gainesville), 3(4): 217-221.

Heppner, J. B. 2010. Notes on the African genus *Ommatothelxis* (Lepidoptera: Oecophoridae: Xyloryctinae). Lepidoptera Novae (Gainesville), 3(4): 222-224.

Heppner, J. B. 2010. The genus *Eumarozia* and a new species in Peru (Lepidoptera: Tortricidae: Olethreutinae). Lepidoptera Novae (Gainesville), 3(4): 228-231.

Heppner, J. B. 2010. Guatemala moth notes, 3. *Eumarozia beckeri* in Guatemala (Lepidoptera: Tortricidae: Olethreutinae). Lepidoptera Novae (Gainesville), 3(4): 232-234.

Heppner, J. B. 2010. Guatemala moth notes, 4. *Caripeta hyperythrata* in Guatemala (Lepidoptera: Geoemtridae: Ennominae). Lepidoptera Novae (Gainesville), 3(4): 235-236.

Heppner, J. B., and J. Brambila. 2010. Florida Lepidoptera notes, 9. *Duponchelia fovealis* in Florida. (Lepidoptera: Pyralidae: Pyraustinae). Lepidoptera Novae (Gainesville), 3(4): 237-241.

Heppner, J. B. 2010. Florida Lepidoptera notes, 10. A new *Tischeria* from Florida (Lepidoptera: Tischeriidae). Lepidoptera Novae (Gainesville), 3(4): 242-244.

Heppner, J. B. 2010. Florida Lepidoptera notes, 11. *Digitivalva clarkei* in Florida (Lepidoptera: Acrolepiidae). Lepidoptera Novae (Gainesville), 3(4): 245-248.

Heppner, J. B. 2010. Florida Lepidoptera notes, 12. *Bucculatrix needhami* (Lepidoptera: Bucculatricidae). Lepidoptera Novae (Gainesville), 3(4): 249-250

Heppner, J. B. 2010. Florida Lepidoptera notes, 13. *Perimede erransella* (Lepidoptera: Cosmopterigidae). Lepidoptera Novae (Gainesville), 3(4): 251-254.

Heppner, J. B. 2010. Review of the Neotropical genus *Hexeretmis* (Lepidoptera: Alucitidae). Lepidoptera Novae (Gainesville), 3(4): 263-268.

Heppner, J. B., and Y. S. Bae. 2010. Notes on Taiwan Moths, 6. *Cerace stipatana* (Lepidoptera: Tortricidae: Tortrici-nae). Lepidoptera Novae (Gainesville), 3(3): 195-198.

Heppner, J. B., and T. S. Dickel. 2010. The European yellow underwing moth, *Noctua pronuba* (Lepidoptera: Noctuidae), in Florida. Southern Lepidopterists' News (Gainesville), 32: 58-59.

Heppner, J. B., T. S. Dickel and V. A. Brou, Jr. 2010. New North American records of the Asian species, *Simplicia cornicalis*, in Florida and Louisiana (Lepidoptera: Noctuidae: Herminiinae). Lepidoptera Novae (Gainesville), 3(1): 53-56.

Judd, R. E. and **D. L. Matthews**. 2010. Report on the capture of a gravid *Samia cynthia* female in Alachua County, Florida. Southern Lepidopterists' News, 32(4): 182-184.

Kawahara, A.Y. 2011. Review of Goldsmith, M.R. and Marec F. (eds) "Genetics and Molecular Biology of Lepidoptera." Florida Entomologist, 94(1): 119-120.

Kawahara, A.Y., J. C. Sohn, J. De Prins, and S. Cho. 2010. Taxonomic report of five leaf-mining moths new to Korea (Lepidoptera: Gracillariidae). Entomological Research, 40: 131-135.

Kim S. R., B. K. Byun, **K. T. Park**, and S. H. Lee. 2010. A taxonomic review of the genus *Nippoptilia* (Lepidoptera: Pterophoridae) from Korea, with description of a new species. Journal of Natural History, 44: 601-613.

Kim S. R., B. K. Byun, **K. T. Park**, and S. H. Lee. 2010. Taxonomic study of the tribe Oidaematophorini (Lepidoptera: Pterophoridae) from Korea, with descriptions of two new species. Journal of Natural History, 44: 1377-1399.

Recent Publications (2010-2011)

Kim S. R., B. K. Byun, **K. T. Park**, and S. H. Lee. 2010. Genus *Promalactis* Meyrick (Lepidoptera, Oecophyoridae) in the northern Vietnam, Part 1: Descriptions of six new species. Florida Entomologist, 93(4): 546-557.

Kwon, Y. D., E. M. Ji, and **K. T. Park**. 2010. A new record of *Disparia diluta* from Korea, with note on *Disparia nihonica* (Lepidoptera: Notodontidae). Korean Journal of Systematic Zoology, 26(1): 35-37.

Lukhtanov, V. A. 2010. Dobzhansky's rule and reinforcement of pre-zygotic reproductive isolation in zones of secondary contact. Zhurnal Obshchei Biologii, 71(5): 372–385.

Lukhtanov, V. A. 2010. From Haeckel's phylogenetics and Hennig's cladistics to the method of maximum likelihood: advantages and limitations of modern and traditional approaches to phylogeny reconstruction. Entomological Review, 90(3): 299–310.

Lukhtanov, V. A. 2010. Role of natural selection in speciation: reinforcement of pre-zygotic reproductive isolation in *Agrodiaetus* blue butterflies. In Charles Darwin and Current Biology. Ed. E.I. Kolchinsky. St. Petersburg. Pp. 268-276.

Lukhtanov, V. A., and V. G. Kuznetsova. 2010. What genes and chromosomes say about the origin and evolution of insects and other arthropods. Russian Journal of Genetics, 46(9): 1115–1121.

Matthews, D. L. 2010. A new species of *Hellinsia* from the Southeastern United States (Lepidoptera: Pterophoridae). Bulletin of the Allyn Museum, 161: 1-13.

Matthews, D. L. 2010. Mississippi plume moths from the Bryant Mather collection (Lepidoptera: Pterophoridae). Southern Lepidopterists' News, 32(2): 50-55.

Matthews, D. L. and G. Gielis. 2011. *Adaina ipomoeae* Bigot and Etienne, 2009, new records for Florida and the West Indies (Lepidoptera: Pterophoridae). Insecta Mundi, 0156: 1-3.

Matthews, D. L., and J. Y. Miller. 2010. Notes on the Cacao Plume Moth in Honduras and description of the larvae and pupae (Lepidoptera: Pterophoridae). Tropical Lepidoptera Research, 20(1): 28-34.

Matthews, D. L., and J. Y. Miller. 2010. Remembering Dale H. Habeck, October 21, 1931 – May 17, 2010. Southern Lepidopterists' News, 32(3): 141-142.

Miller, J. Y., D. L. Matthews, and J. Brambila. 2011. Southern Lepidopterists at Butterflyfest 2010. Southern Lepidopterists' News, 33(1): 28-30.

Mitter, K. T., T. B. Larsen, S. Collins, G. Vande Weghe, J. De Prins, W. De Prins, S. Sfian, E. Zakharov,

D. J. Hawthorne, **A. Y. Kawahara,** and J. C. Regier. 2011. Genetic evidence for multiple cryptic species of *Pseudopontia* (Pieridae: Pseudopontiinae). Systematic Entomology, 36(1): 139-163.

Mullen, S. P., W. Savage, and **K. R**. **Willmott.** 2010. Rapid diversification and not clade age explains high diversity in neotropical *Adelpha* butterflies. Proceedings of the Royal Society of London B doi:10.1098/rspb.2010.2140 (November).

Padrón P. S. 2010. Systematics and Biogeography of High Altitude Tropical Andean Satyrines (Lepidoptera, Nymphalidae: Satyrinae). M.Sc. Thesis, University of Florida, Gainesville, Florida, USA. 98 pp.

Park, K. T. 2011. A new species of *Halolaguna* Gozmány from Thailand (Lepidoptera, Lecithoceridae). Journal of Asia-Pacific Entomology, 14: (doi:10.1016/j.aspen.2010.12.006).

Park, K. T. 2011. Lecithoceridae (Lepidoptera, Gelechioidea) of New Guinea, Part II: *Hamatina* Park with description of two new species. Journal of Asia-Pacific Entomology, 14: (doi: 10.1016/j.aspen.2010.12.005).

Park, K. T. 2011. Lecithoceridae (Lepidoptera, Gelechioidea) of New Guinea, Part I: *Onnuria* Park with description of two new species. Proceedings of the Entomological Society of Washington, 113: (in press, no DOI number).

Park, K. T., and B. K. Byun. 2010. A new genus *Neopectinimura* (Lepidoptera, Lecithoceridae) with descriptions of five new species. Florida Entomologist, 93(2): 298-307.

Park, K. T., and C. Wu. 2010. Genus *Lecithocera* of Thailand Part V. with reports of nine species including six new species (Lepidoptera: Lecithoceridae). Tropical Lepidoptera Research, 20: 62-70.

Park, K. T. 2010. A new genus *Woonpaikia* Park, gen. nov. (Lepidoptera, Lecithoceridae), with descriptions of two new species *Syntetarca* Gozmány. Journal of Asia-Pacific Entomology, 13(3): 239-242.

Park, K. T. 2010. First record of *Torodora* species from Papua New Guinea, with a description of a new species (Lepidoptera, Lecithoceridae). Proceedings of the Entomological Society of Washington, 112: 404-409.

Park, K. T. 2010. Four new species of the subfamily Torodorinae from Thailand (Lepidoptera: Lecithoceridae). Lepidoptera Novae, 3: 145-148.

Park, K. T. 2010. Two new genera, *Caveana* gen. nov. and *Triviola* gen. nov., and two new *Torodora* species from Thailand (Lepidoptera, Lecithoceridae). Entomological Science, 13(2): 250.

Park, K. T. 2010. Two new species of the genus *Telephata* Meyrick (Lepidoptera, Lecith oceridae) from Papua New Guinea with notes on *T. nitens* (Daikonoff), comb. nov. Entomological Science, 14(1): 82-86.

Rota, J. 2011. Data partitioning in Bayesian Analysis: Molecular phylogenetics of metalmark moths (Lepidoptera: Choreutidae). Systematic Entomology, 36: 317-329.

Salcedo, C. 2010. Environmental elements involved in communal roosting in *Heliconius* butterflies (Lepidoptera: Nymphalidae). Journal of Environmental Entomology, 39(3): 907-911.

Salcedo, C. 2010. Evidence of pollen digestion at nocturnal aggregations of *Heliconius sara* in Costa Rica (Lepidoptera: Nymphalidae). Tropical Lepidoptera, 20(1): 35-37.

Salcedo, C. 2010. The Biology of *Heliconius* Night Roosting: a Foundation. Ph.D. dissertation. University of Florida.

Salcedo, C. 2011. Evidence of predation and disturbance events at *Heliconius* butterflies roosting aggregations in Panama and Costa Rica. Journal of Natural History, in press.

Salcedo, C. 2011. Pollen preference for *Psychotria sp.* is not learned in *Heliconius erato* (Lepidoptera: Nymphalidae). Journal of Insect Science, in press.

Scott, J., **A. Y. Kawahara**, J. Skevington, S.H. Yen, A. Sami, M. Smith, and J. Yack. 2010. The evolutionary origins of ritualized acoustic signals in caterpillars. Nature Communications, 1: 4.

Simonsen, T. J., N. Wahlberg, **A. D. Warren,** and F. A. H. Sperling. 2010. The evolutionary history of *Boloria* (Lepidoptera: Nymphalidae): phylogeny, zoogeography and larval foodplant relationships. Systematics and Biodiversity, 8(4): 513-529.

Sohn, J. C., and **K. T. Park**. 2010. Three new species of *Lycophantis* Meyrick (Lepidoptera: Yponemeutidae) from Vietnam with keys of the world species. Oriental Insects, 44: 225-233.

Sohn, J. C., S. W. Cho, and **K. T. Park**. 2010. New records of three Yponomeutinae (Lepidoptera: Yponomeutidae) from Korea. Korean Journal of Systematic Zoology, 26: 225-233.

Sourakov, A. 2010. Book Review: *Moths of Western North America* (2009). Powell J. and P. Opler. Florida Entomologist, 93(2): 330.

Sourakov, A. 2010. Natural and sexual selection in satyrine wing patterns: a complex story. News of Lepidopterists' Society, 52(1): 6-7, 15.

Sourakov, A. 2010. New hostplant records for two noctuid species in Florida. Notes of the Association for Tropical Lepidoptera, June 2010 issue, p. 2.

Sourakov, A., and T. Paris. 2010. Fall webworm, *Hyphantria cunea* (Lepidoptera: Arctiidae). *Featured Creatures* Website, http://entomology.ifas.ufl.edu/creatures/, University of Florida. Publication Number: EENY-486.

Tennent, W. John**, J. Y. Miller**, and A. Rawlins. 2010. Distribution of *Acrophtalmia chione* Felder & Felder, 1867, with descriptions of two new subspecies from Eastern Indonesia (Lepidoptera: Nymphalidae: Satyrinae). Bulletin of the Allyn Museum, 162: 1-7.

Vershinina, A. O., and **V. A. Lukhtanov.** 2010. Geographical distribution of the cryptic species *Agrodiaetus alcestis alcestis*, *A. alcestis karacetinae* and *A. demavendi* (Lepidoptera, Lycaenidae) revealed by cytogenetic analysis. Comparative Cytogenetics, 4(1): 1-11.

Vila, R., **V. A. Lukhtanov,** G. Talavera, T. F. Gil, N. E. Pierce. 2010. How common are dot-like distribution ranges? Taxonomical oversplitting in Western European *Agrodiaetus* (Lepidoptera, Lycaenidae) revealed by chromosomal and molecular markers. Biological Journal of the Linnean Society, 101: 130-154.

Ware, J., J. Thomas, and **A. Y. Kawahara,** 2011. Instant symposium: When entomologists date. American Entomologist, 57(1): 46.

Warren, A. D., J. C. Whelan, and T. C. Emmel. 2010. Notes on mate-locating behavior by the skipper *Phocides polybius lilea* (Reakirt, [1867]) (Lepidoptera: Hesperiidae: Eudaminae). Tropical Lepidoptera Research, 20(1): 38-40.

Willmott, K. R., and J. P. W. Hall. 2010. A new species of *Dynamine* Hübner, [1819] from northwestern Ecuador (Lepidoptera: Nymphalidae: Biblidinae). Tropical Lepidoptera Research, 20: 23-27.

Scriber, J. M. 2011. INVITED REVIEW: Impacts of climate warming on hybrid zone movement: geographically diffuse and biologically porous "species borders". Insect Science 18 (2): 121-159.

Scriber, J. M. 2010 INVITED REVIEW: Integrating ancient patterns and current dynamics of insect-plant interactions: taxonomic and geographic latitude in herbivore specialization. Insect Science. 17: 471-507.

Ording, G. A., Mercader, R. J., Aardema, M. L., and **Scriber, J. M.** 2010. Allochronic isolation and incipient hybrid speciation in tiger swallowtail butterflies. Oecologia. 162: 523-531.

Aardema, M. L., **J. M. Scriber**, and J. J. Hellmann. 2011. Considering local adaptation issues of lepidopteran conservation- a review and recommendations. The American Midland Naturalist: 165(2): 294-303.

MCGUIRE CENTER SEMINAR SCHEDULE FALL 2010

Tues., Aug, 31: **"What I did last summer"** Traditional short talks by McGuire Center students and staff

Tues., Sept. 14: Jamie Radford, Cambridge University: **"The first butterfly inventories in Ecuador's 'tercera cordillera' "**

Tues., Sept. 28: Rich Cech, New York City: **"Butterflies of the Peruvian Amazon and how to find them"**

Tues., Oct. 12: Andy Warren, McGuire Center: **"The Butterflies of Kenya"**

Tues. Oct. 26: J.D. Turner, McGuire Center: **"Studies on the Riodinidae – past, current and future"**

Tues. Nov. 9: Charles V. Covell, Jr., McGuire Center: **"Highlights of meetings and field trips 2010: So many bugs; so little time!"**

Tues. Nov. 23: Delano Lewis, McGuire Center: **"A Novel Biorational Approach to Insect Control: Efficacy of Methionine against *Heraclides cresphontes*, a surrogate of the invasive citrus swallowtail, *Papilio demoleus* (Lepidoptera: Papilionidae)"**

Tues. Nov. 30: Christopher Wheat, Helsinki: **"Using the latest tools to address the old questions in ecology and evolution: How next generation sequencing can be applied to fundamental questions in butterfly model systems"**

Tues. Dec. 7: Matthew Thom, UF Department of Entomology & McGuire Center: **"Habitat suitability of the rare frosted elfin butterfly, *Callophrys irus* Godart (Lepidoptera: Lycaenidae) in Florida"**

Staff News

Conferences, Workshops, Courses, Grants and Awards – Nearly the entire McGuire Center staff presented their work at the Lepidopterists' Society Annual Meeting in Leavenworth, Wash., in July 2010. **Akito Kawahara**, who is currently studying evolution of the aquatic and carnivorous cosmopterigid moth in Daniel Rubinoff's lab at the University of Hawaii, also co-organized the Entomological Society of America Annual Meeting in San Diego and the Northeast Arthropod Divergence Time Estimation Workshop in Rutgers, N.J., and attended the Entomological Society of America's Pacific Branch Meeting in Hawaii during March 2011. **Andrei Sourakov** presented "Richness and Phenology of a Moth Community in North Central Florida" at the Florida Entomological Society annual meeting in Jupiter, Fla., and Forum Herbulot in Gainesville. Sourakov also served as an overseas examiner for a Ph.D. degree at the University of Tasmania. **John Heppner** attended a symposium for the Natural History Museum of Korea, Incheon (Gangwa), South Korea, in July 2010. **K.T. Park traveled to** Leiden, Holland, for 10 days to examine type specimens of New Guinea moths. **Andrew Warren** was co-author of several presentations at scientific meetings, including three presentations at the Sixth International Conference on the Biology of Butterflies held at the University of Alberta, Edmonton, Canada and two presentations at the Southern Lepidopterists' Society/Association for Tropical Lepidoptera Annual Meeting in Gainesville. **Jadranka Rota** made a presentation at the Annual Meeting of the Entomological Society of America in San Diego and at the European Congress of Entomology in Budapest, Hungary. She is currently serving as editor of *Zootaxa*. **James Hayden** received a grant from the Carnegie Museum of Natural History O'Neil Fund to collect near Manú National Park in Amazonian Peru. He also presented at the Entomological Society of America Annual Meeting. **Hayden** started working at the McGuire Center in March 2011. **Deborah Matthews** co-taught a Butterfly Rearing Workshop with **Jaret Daniels** and Edith Smith, during ButterflyFest in October 2010 and presented on her favorite group of plume moths at the Southern Lepidopterists' Society/Association for Tropical Lepidoptera Annual Meeting. She and **Jacqueline Y. Miller** spent several days at the Smithsonian's National Museum of Natural History identifying moths for their Honduras inventory project. **Vladimir Lukhtanov** currently serves as a team member on several grants, including the NSF-funded, three-year McGuire Center collections improvement project, the Catalan Institution for Research and Advanced Studies in Spain, the Foundation of Science and Technology of Portugal, and the Polish Committee of Scientific Research. **Lukhtanov** co-authored a presentation on *Integrating Ecology into Macroevolutionary Research* at the Zoological Society of London, and three presentations at the International Conference on Karyosystematics of the Invertebrates in Novosibirsk, Russia, and taught a course on molecular evolution and phylogenetics. **Keith Willmott** visited collections in France, Great Britain, Peru and Poland, taught a course in evolutionary biogeography with Nico Cellinese, Florida Museum assistant curator of informatics, and lectured at the Catholic University in Quito, Ecuador.

Obituaries

Mr. Jack H. Cox, Jr., a North Carolina native and McGuire Center Research Associate, died unexpectedly of malaria June 22, 2010, while working on a crocodile project with the Wildlife Conservation Society in Laos. Born Dec. 4, 1952, he earned a bachelor's degree in environmental science from the University of North Carolina at Chapel Hill. He served in the Peace Corps. and worked as a consultant for many environmental organizations, and occasionally, for television producers, including TV New Zealand. As a true naturalist he enjoyed the diversity of wildlife, particularly birds and reptiles, and focused his efforts on crocodile conservation. He lived in a small village in the rugged area of Papua New Guinea and hiked repeatedly, sometimes for more than three months at a time, through the wilderness of Nepal. Mr. Cox met McGuire Center Director Thomas C. Emmel in 1982 and took an interest in butterflies. He conducted several surveys of remote parts of New Guinea and donated his collections to the Museum. He normally spent no more than two months a year in the U.S., usually around Christmas. During his brief time in the states, Mr. Cox typically would visit Gainesville, sharing stories and photos of his latest adventures and working on manuscripts. His most recent publication, co-authored with Emmel, deals with the diversity of butterflies in the Hunstein Mountain Range of Papua New Guinea.

Dr. Dale H. Habeck, long-time McGuire Center Research Associate, died in May 2010 at his home in Indiana, where he spent summers to be closer to his family. Born Oct. 21, 1931, in Wisconsin, he developed an early fascination with nature that led him to study insects at the University of Wisconsin. He received his Ph.D. in Entomology at North Carolina State University in 1959, and in 1963 accepted a faculty position with the UF Entomology and Nematology Department, where he worked 33 years. During his career, he visited nearly 50 countries, often in search of insects that might eat the aquatic weeds that clog many of Florida's waterways. He also taught, supervised dozens of graduate students, and wrote more than 100 scientific papers. Following his retirement, Dr. Habeck worked in the McGuire Center, where he donated many of his collections. He had a special interest in caterpillars, and tens of thousands of the specimens he collected reside in the McGuire Center and other museums. He had many other interests, including cactus plants, bird watching, raising catfish and collecting various items featuring insects, including postage stamps.

Student News

McGuire Center volunteer **Oren Sharabi**, who left for Tufts College after graduating from Eastside High School, returned to the collections during summer 2010 to work as a curatorial assistant. Another McGuire Center volunteer, **Alexandra Sourakov**, has conducted her school science project at the McGuire Center for the past two years. This year, she again won the regional science fair in the zoology category with the project "Chemical Basis of Olfactory Preferences in Tropical Butterflies." She used sophisticated methods and equipment at the USDA research facility for detecting and analyzing chemicals that attract butterflies to food. **Natasha Wright**, who received her undergraduate degree in entomology from UF and worked at the McGuire Center as a technical research assistant, enrolled in a Ph.D. program in entomology at Arkansas State University. **Thomson Paris** successfully defended his thesis "Modern threats to the Lepidoptera in the Florida ecosystem." He is now working with the Florida Division of Plant Industry. **Christian Salcedo** completed his Ph.D. and his dissertation was titled "The biology of *Heliconius* night roosting: a foundation." During his last semester, Christian took a new course in insect chemical ecology at The Pennsylvania State University. Following graduation, Christian accepted a visiting scientist position at the Beijing Academy of Sciences, China, working on chemical ecology through a Chinese Academy of Sciences Young International Scientist Postdoctoral Fellowship. **Sebastian Padrón** successfully defended his master's thesis "Systematics and biogeography of high altitude tropical Andean satyrines (Lepidoptera, Nymphalinae: Satyrinae)," and spent two semesters in Ecuador conducting field work and applying for grants. A grant from the Ecuadorian government (three-year SENACYT Ph.D. scholarship of $70,000) and a McGuire Center for Lepidoptera and Biodiversity scholarship have allowed him to return to the McGuire Center for his Ph.D., with Keith Willmott as his advisor. **Craig Segebarth**, who worked in the collections as a technical research assistant for a year, returned after spending three months in Guatemala where he greatly improved his Spanish. **Nina Zagvazdina**, who worked for two years at the McGuire Center, first as a volunteer, and later as a technical research assistant, enrolled in the UF doctor of plant medicine degree program. Graduate student **Lary Reeves** accepted a graduate assistantship maintaining UF's Natural Area Teaching Lab located behind the Florida Museum. During the summer, Lary traveled to the Philippines for research. **Geoff Gallice** attended the "Invertebrates in Education and Conservation" conference in Rio Rico, Ariz. He received an NSF Graduate Research Fellowship for three years, which will enable him to complete his Ph.D., a Tropical Conservation and Development field research grant, and a grant from the Sophi Danforth Conservation Biology Fund.

Meetings at the Center

Forum Herbulot – This congress is normally held every four years and is dedicated specifically to studying Geometriidae (inchworm moths). The McGuire Center hosted the meeting during the summer, with participants traveling from Australia, Brazil, Canada, Costa Rica, Estonia, France, Germany, South Africa and many U.S. states. **Charles Covell** organized the congress with help from **Deborah Matthews** and graduate students. Two days of presentations and interactions were followed by a field trip to Honduras. More on Forum Herbulot may be found online, www.herbulot.de/.

Forum Herbulot participants take a break from the meeting for a group photo outside the McGuire Center.

ATL/SLS annual meeting – The combined annual meeting of the Association for Tropical Lepidoptera and Southern Lepidopterists' Society took place at the McGuire Center in October 2010, with many participants from the U.S. and abroad. This eclectic group traded photographs of collecting trips and research results. The annual Association for Tropical Lepidoptera conference at the McGuire Center is an excellent venue for students to present their research for the first time in a friendly, stress-free environment and receive feedback from colleagues. The meeting was co-chaired by **Jacqueline Miller and Deborah Matthews**. The banquets and social events allow participants to develop new collaborations and friendships. The meeting also includes a photo contest, with entries displayed throughout the conference. This year, 114 entries were submitted in three categories: butterflies, moths and immature stages. The next photo contest will be held in September and October. More information about the association is available online, www.troplep.org/.

MCGUIRE CENTER SEMINAR SCHEDULE SPRING 2011

Tues. Jan. 18. Charles V. Covell, Jr., McGuire Center: **"The Cosñipata Valley of Peru: Home of the world's richest butterfly diversity?"**

Tues. Jan. 25: Vladimir Lukhtanov & Andrei Sourakov, McGuire Center: **"Using DNA barcoding in the systematics of Palearctic butterflies"**

Tues. Feb. 8: Julieta Brambila, APHIS/USDA, Gainesville: ***"Autographa gamma* (Noctuidae): A review of recent surveys in the U.S. of potentially invasive moths"**

Tues. Feb. 22: Nancy Turner, M.D., McGuire Center: **"Medical issues for tropical field trip participants"**

Tues. March 15: James Hayden, FSCA/DPI: **"Morphological and ecological diversity of Pyraloidea, the 'middle kingdom' of moths"**

Tues. March 29: Mirian Hay-Roe, USDA: **"Direct effects of plant secondary compounds in the Poacea family on the fall armyworm *Spodoptera frugiperda*, and a hymenopterous parasitoid Euplectrus platyhypennae: Implications for tritrophic interactions"**

Tues. April 5: Montana Atwater, McGuire Center & UF Department of Entomology & Nematology: **"The Diversity and Pollination Ecology of Moths in Florida's sandhill habitat"**

Tues. April 19: Kathy Malone, IFAS, University of Florida: **"Antarctica: Animal behavior 'on ice' "**

McGuire Center for
Lepidoptera and Biodiversity
Florida Museum of Natural History
University of Florida Cultural Plaza
PO Box 112710
Gainesville, FL 32611-2710

Andrew Warren collects butterflies in Wyoming.

McGuire Center technician Craig Segebarth, accessions recently donated collections.

Recent McGuire Center graduate Christian Salcedo, right, works with residents in Honduras.

Volunteer Yanzi Zhang works in the collections.

STAFF PROFILE CONTINUED: Andrew D. Warren

taxa and 100,000 images provided by more than 275 contributors.

McGuire Center: Andy Warren is the senior collections manager. He maintains the Lepidoptera collections, integrates new material into the curated collection, curates families that require major reorganization, transports and accessions new collections, sends and receives specimen loans and conducts research on butterfly systematics and biodiversity. Warren also oversees and directs five technicians and several volunteers, hosts and assists visitors to the collection and answers inquiries from researchers and the public.

Field Work

Deborah Matthews and **Jacqueline Y. Miller** spent three days at the Centro Zamorano de Biodiversidad in Honduras working on identifications of Lepidoptera they collected at Pico Bonito reserve. They also spent several days collecting in Washington's Wenatchee National Forest. **Akito Y. Kawahara** worked in French Guiana on the moth family Gracillariidae as part of an international group. The trip included boat and helicopter travel to reach the remote sampling locations. **Kawahara** also conducted fieldwork in Hawaii, traveling by helicopter to a remote site of Kauai to collect and sample aquatic and carnivorous moths. **Geoff Gallice** conducted field work in the Ecuadorian Amazon, including Yasuni National Park. **Sebastian Padrón** spent 10 days in the Cordillera del Condor working on the first butterfly inventories of Ecuador's Tercera Cordillera. He also collected for several days in Ecuador's cloud forest. **John Heppner** worked in Panama, South Korea and Vietnam this year. During his tenure at UF, **James C. Dunford** (Ph.D., entomology and nematology, 2007) worked on the taxonomy and systematics of *Speyeria* butterflies with the late **Lee Miller** serving as his adviser. Now a research associate of the McGuire Center and Florida State Collection of Arthropods, Dunford continues to pursue various Lepidoptera studies, but his professional occupation is medical entomologist for the United States Navy. He was recently deployed to Afghanistan, where he provided support and consultation to all military and civilian personnel. He held the country's first military entomology meeting to discuss disease vector control and improve the Department of Defense integrated pest management plan. He also trained more than 1,000 secondary, graduate and professional medical and non-medical Afghanistan residents. **Thomas Emmel, Andrew Warren, J.D. Turner,** and **Court Whelan** spent two weeks on Isla de Cedros in Baja California, Mexico. **Warren** also worked 10 days in the mountains of Oregon and Washington. **Vladimir Lukhtanov** conducted field work in Kazakhstan and **Keith Willmott** spent two months exploring remote parts of Ecuador.

Collections News

The McGuire Center received a number of important collection donations, including those of David L. Bauer, Clement Baker, Robert Eisele, Dale H. Habeck, William W. McGuire, Paul Milner, Ray Nagle, Floyd and June Preston, William Swisher, Bruce Walsh, Kent Wilson and others. Tens of thousands of unit trays and 20,000 insect drawers were purchased thanks to the generosity of the McGuire Family Foundation and an NSF grant, allowing staff to continue curating the collections. **Vladimir Lukhtanov** spent six months at the McGuire Center, making large advances in curating Blue butterflies (Lycaenidae). **J.D. Turner**, who recently moved to Gainesville to work as a McGuire Center research associate, is working full time curating metalmark butterflies (Riodinidae). **Andrew Warren** nearly completed curating Hesperiidae to the species level. He and other staff members are making large advances in merging and curating the Pieridae of the Allyn Museum with other major Pieridae holdings (including about 90,000 from the Eitschberger collection). Under the leadership of **John Heppner** and **Charles Covell**, tremendous progress was achieved in curating moths of all groups. A number of volunteers are assisting with curatorial processes, especially in accessioning recent donations. They include Lindsey Anderson, David Auth, Illan Bubb, Sonal Dolakia, Amanda Farrell, Joon Kim, Jeff Shapiro, Yanzi Zhang, Heather Sipe and Ross Whetston.